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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/624,810

07/22/2003

Jack Dunnous

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06/15/2006

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EXAMINER

TUROC, DAVID P

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,810

Applicant(s)

DUNNOUS ET AL.

Examiner

David Turocy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/10/06 have been fully considered but they are not persuasive.

The applicant has argued against the use of the 131 declaration as admitted state of the art, arguing prior art requires by "another". The examiner agrees prior art requires by "another", however the examiner notes paragraph 7 of the declaration which states the concrete equipment was known and used by another, particularly Anchor.

Prior to April 22, 2002, Anchor showed inventor Bill Yocum Anchor's equipment for producing multi-color concrete. The equipment discharged a wet concrete mix from a vessel and sprayed a first spray color dispersion comprising a pigment dispersed in water onto the wet concrete mix discharging from the vessel to form a pattern of applied color in the wet concrete mix. The concrete was allowed to cure, which is known because inventor Yocum saw samples of the output of the machine that were cured concrete. The pigment dispersion Anchor was using in its equipment comprised a pigment dispersed in water, not a spray color dispersion according to the present invention.

The applicant has argued against the Jungk reference, stating the reference fails to teach applying the pigment/binder dispersion to the concrete surface and states there is no teaching to modify Jungk, however, the examiner notes Jungk is used as a

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teaching of a pigment/binder dispersion and the examiner does not modify Jungk but rather the ASA in view of Jungk. It would have been obvious to one skilled in the art at the time the invention was made to modify ASA to use the pigment/binder mixture as suggested by Jungk to provide a desirable coloring of concrete with a reasonable expectation of success because ASA teaches of spraying liquid pigment onto wet concrete and Jungk teaches a pigment/binder mixture easily dissolvable and dispersible in concrete.

The applicant has argued against the Jungk reference stating the reference teaches a dry pigment and does not teach a liquid pigment. While such an argument is not commensurate in scope with the claims, the examiner notes, Jungk discloses using a slurry of 53% by weight pigment and 2 % by weight binder, which is within the range of the applicant's Claims 23 and 24, with the balance water (Example 1), which is clearly liquid.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The applicant has argued against the Jungk reference stating the reference discloses using the binder to disperse the pigment in the concrete and does not disclose the polymer binding agent bonds to the wet concrete. However, the examiner respectfully disagrees, and maintains Jungk discloses using the same polymer binding

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agent as required by the applicants claim 12 and therefore, since the process steps are the same, Jungk must necessarily have the same results, i.e. applying a polymer binding agent to wet concrete as required by the claim must necessarily result in some degree of binding. However, the prior art and the present claims, reflected by claims 11 and 12, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by applying a pigment/polymer binding agent dispersion to wet concrete, it must necessarily result in the polymer binding agent bonding to the wet concrete. Either 1) the applicant and the prior art have different definitions for an spraying the dispersion on the wet concrete, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 7, 11, 12, 14, 19, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the art, hereafter ASA in view of US Patent 4946505 by Jungk, hereafter Jungk.

ASA discloses it was known in the art to produce multicolored concrete by discharging wet concrete mix from a vessel and spraying a first color dispersion onto the wet concrete discharging from the vessel to form a pattern of applied color and allowing the concrete to cure (Declaration filed 12/5/2005 paragraph 7). The spray inherently is under pressure and has a flow pattern. ASA discloses the first color dispersion comprises a pigment dispersed in water (Declaration filed 12/5/2005 paragraph 7).

ASA fails to disclose mixing a pigment water dispersion and a polymer binding agent to form a spray color dispersion. However, Jungk, teaching of a process for coloring concrete, discloses a known dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1). Jungk discloses using any binder that will not be disturbing in the concrete and additionally promotes the dispersing of the pigments in the concrete; include polymer of vinyl acetate (Column 3, lines 31-49). Jungk discloses using a slurry of 53% by weight

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pigment and 2 % by weight binder, which is within the range of the applicants Claims 23 and 24, with the balance water (Example 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify ASA to use the pigment/binder mixture as suggested by Jungk to provide a desirable coloring of concrete with a reasonable expectation of success because ASA teaches of spraying liquid pigment onto wet concrete and Bailey teaches a pigment/binder mixture easily dissolvable and dispersible in concrete.

ASA in view of Jungk fails to explicitly teach a resultant polymer structure insoluble in water that remains part of the cured concrete. However, Jungk discloses utilizing concrete blocks including the polymer binder in areas subject to weather conditions, wherein the concrete will keep its color for many years without the need for maintenance, including architectural concrete blocks and bricks as well as concrete blocks used in various landscaping applications, including bank stabilizers, barrier walls, and bridges (Column 1, lines 13-25). It is the examiners position that the multi-color concrete blocks as taught by ASA in view of Jungk inherently has a polymer structure insoluble in water to protect the color pattern within the concrete block from the probable weather conditions.

ASA in view of Jungk fails to explicitly teach binding the polymer binding agent with the wet concrete. However, the prior art and the present claims, reflected by claims 11, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by applying a pigment/polymer binding agent dispersion to wet concrete, it must

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necessarily result in the polymer binding agent bonding to the wet concrete. Either 1) the applicant and the prior art have different definitions for an spraying the dispersion on the wet concrete, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

5. Claims 3-6, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 5993551 by Hahn, hereafter Hahn.

Claims 3, 4, 15, and 16: ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach using a plurality of nozzles to providing a first and second spray dispersion, wherein the first and second dispersion are different.

However, Hahn, teaching of a method of multi-color spraying concrete, discloses spraying concrete, on a conveyer, using a plurality of nozzle and using different colored spray dispersions to provide the appropriate color pattern (figures, Column 8, lines 11-44). While the examiner notes Hahn is spraying formed tiles, rather than the claimed wet concrete, Hahn shows a method of spraying multiple colors to form a multicolored substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify ASA in view of Jungk to use the plurality of nozzles to spray multiple color dispersions as suggested by Hahn to provide a desirable multicolored concrete with a reasonable expectation of success because Hahn

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discloses using multiple of nozzles to apply multiple spray dispersions is known in the art to provide the desired pattern and therefore would reasonably be expected to effectively provide a pattern in the colored concrete as taught by ASA.

Claims 5, 6, 17, and 18: ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach pulsed spraying.

However, Hahn, teaching of a method of multi-color spraying concrete, discloses forming the desired pattern on the substrate by cycling each spray nozzle on and off to determine the pattern (Column 7, lines 37-42). Hahn discloses varying the timing between the pulsing allows for a variety of patterns to be applied to the substrate (Column 7, lines 37-42). While the examiner notes Hahn is spraying formed tiles, rather than the claimed wet concrete, Hahn shows a method of spraying multiple colors to form a multicolored substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify ASA in view of Jungk to use the pulsed spray to spray multiple color dispersions as suggested by Hahn to provide a desirable multicolored pattern with a reasonable expectation of success because Hahn discloses using pulsing spray is known in the art to provide a variety of patterns on the substrate and therefore would reasonably be expected to effectively provide a variety pattern in the colored concrete as taught by ASA.

6. Claims 8-9 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of Kirk-Othmer.

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach of nozzles having a desired flow pattern selected from the group consisting of a solid cone, a hollow cone, and a flat spray, or spraying in the form of a stream.

However Kirk-Othmer, teaching of conventional spray systems, discloses that the spray pattern or shape is an important factor in selecting the right nozzle for certain processes (Page 687, full paragraph 4). Kirk-Othmer discloses that in most cases it is necessary to "fine-tune" the sprays through trial and error to achieve the goals of low cost and high performance (Page 687, full paragraph 4). Kirk-Othmer discloses known and conventional spray patterns utilized in various spray applications include a solid cone, a hollow cone, a flat spray, and a stream (Page 688, Table 2).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify ASA in view of Jungk to use any of the spray patterns, including a solid cone, a hollow cone, a flat spray, and a stream, suggested by Kirk-Othmer to provide a process with high performance and low cost because ASA in view of Jungk teaches spraying a pigment dispersion to color concrete and Kirk-Othmer teaches trial and error in selecting the specific nozzle pattern for the specific process to optimize the results of process performance and quality of the end product.

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7. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 4578290 by Komon et al., hereafter Komon.

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach of adjusting the vertical distance between the substrate and the nozzle.

However, Komon, teaching of a method of spraying a substrate, discloses the distance between the is a known result effective variable, wherein the distance between the substrate and the nozzle determines the coating pattern (abstract).

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the distance between the substrate and nozzle used in the process of ASA in view of Jungk, including varying the distance, through routine experimentation, to impart the wet concrete with the desired spray pattern.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 5846315 by Johansen, Jr et al ("Johansen").

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejections above. However, ASA in view of Jungk fails to teach of including at least one filler in the pigment/binder mixture to produce a desired effect. However, Jungk, teaching of a process for coloring concrete, discloses a known

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dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1).

Johansen, teaching of an aqueous composition for coloring cement based compositions, discloses including suspension enhancing agents in a pigment/binder aqueous compositions (Abstract). Johansen discloses the suspension enhancing agent decrease the settling of the aqueous component and aids in the stabilization (Column 3, lines 53-64). It is the examiners position that such suspension enhancing agents inherently act as "fillers".

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify ASA in view of Jungk to use the pigment/binder solution including a filler suggested by Johansen to provide a desirable coloring of a cement based material because ASA in view of Jungk teaches providing additional additives to an aqueous pigment/binder composition when coloring concrete and Johansen teaches that adding a filler aids in stabilizing the aqueous pigment/binder composition when coloring a cement-based composition.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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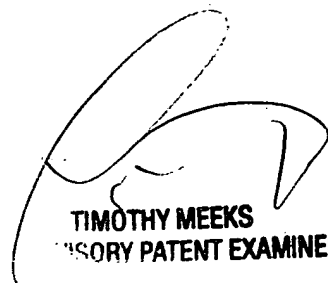
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762



TIMOTHY MEEKS
ADVISORY PATENT EXAMINER